

Lookouts

Overview

The lookouts module will focus on where and how to position a lookout, break down specific tasks of a lookout and then discuss communication as it relates to serving as a fire lookout.

Being a lookout is not the sexiest job, but it is the most important.

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Lime Fire Scenario: Part I



The Lime fire started on August 17th on the White River National Forest in Colorado. The effects of the Mountain Bark Beetle have been devastating in this region, and the fire started in an area whose primary fuel type is bug killed lodgepole pine. The weather over the past several days has generally been temperatures in the 70s and 80s with occasional 90 degree readings and humidity dropping into the middle teens. The current temperature is 75 with an RH of 25%. The forecast calls for a high temperature of 85 and RHs dropping into the low teens. Also, there are widely scattered thunderstorms forecasted for this afternoon. Fuels over the fire area generally consist of grass/sage with scattered junipers, ponderosa pine and clumps of bitterbrush and curly-leaf mahogany.

*****DO NOT PROCEED UNTIL DIRECTED TO DO SO BY
FACILITATOR*****

You are the incident commander and the squad leader of a five person module who have been ordered to initial attack the fire-which appears to be about 20 acres in size at the time of initial attack. It is 0900 and your crew has arrived on scene and is preparing to receive a briefing. You will need to assign a lookout for the fire.



What considerations should be made when designating a crewmember to serve as the lookout? (considering experience level, specialized skills, etc.)



What considerations should be made when choosing a location for the lookout? (considering fuels, weather, topography, etc.)?

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You are now the lookout. It is 1500 and fire activity is starting to pick up. The incident commander has ordered a 20 person crew and a helicopter to start performing bucket drops on the fire. The temperature is 86 degrees and RH is 13. You notice some cloud build up to the southeast.





As the lookout, do you still have a good view of the resources you are responsible for? If not, what actions need to be taken?



You are starting to observe fire behavior that is concerning and you need to get on the radio to let the crew boss know. There is too much radio traffic and you can't break through. What are your options?



Planning ahead for a worst case scenario situation, what types of considerations should you be thinking about?

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Fire Behavior for Lookouts

Lookouts must monitor and understand the fire environment components of weather, topography and fuels and recognize how each component will modify the fire environment; all while watching for the important indicators of change. Recognizing these indicators of change early, understanding their ramifications and effectively communicating how they will alter the fire environment is paramount to developing, maintaining and updating situational awareness in this dynamic fire environment.

Some indicators to observe:

Weather: Most dynamic component of the fire environment and will usually precede any changes in fire behavior

- Wind Speed – Changes in forecasted direction and/or speed.
- Relative Humidity – Trends up or down; abrupt changes
- Temperatures- Increasing or decreasing
- Probability of Ignition - increasing or decreasing
- Clouds- Type, changes in direction, development; indicator clouds for thunderstorms
- Inversion- lifting or settling
- Fire whirl or dust devil development – atmospheric instability
- Fire Weather Forecast Updates or unexpected weather conditions developing

Fuels: Can vary greatly in the fire environment and change conditionally over time

- Changes in fuel types – Increases or decreases in rates of spread or flame lengths
- Canopy Continuity – Fuel shading, spotting potential, torching and crown fire potential
- Exposure – Winds and sunlight impact on surface fuels
- Fuel Moisture – Abrupt changes, seasonality or reaching local thresholds in live and dead fuels
- General condition – Health, seasonal curing, continuity, fuel loading

Topography: Static, but topography will alter fire behavior as the fire progresses into new terrain

- Barriers to spread - Natural or man-made
- Slope – Increases or decreases, reversals
- Saddles, narrow canyons and box canyons
- Ridges and leeward slopes

Any component you observe that is out of the ordinary, unexpected or un-forecasted may be that critical early warning indicator to potentially abrupt changes in your fire environment.

Some indicators of change may be more difficult to detect and monitor than others; but ultimately, if any unexpected or rapid changes in the fire behavior occur (developing column, increasing rates of spread/flame lengths, increasing spot fires and rapid transition from single/group tree torching to crown fire) need to be communicated immediately.